

**Patent claims**

1. Method of establishing a PWM-modulated output signal representation (OS),

5 providing a stream of parallelly determined intersection representations (PIR) on the basis of a stream of parallel reference signal representations (PRSR) and an input signal (IS),

10 establishing a serial PWM output signal representation (OS) by transforming said stream of parallelly determined intersection representations (PIR) into a stream of serial intersection representations (SIR) by means of a relative time shift of at least one of said parallelly determined intersections (PIR).

15 2. Method of establishing a PWM-modulated output signal representation (OS) according to claim 1, whereby said relative time alignment is established according to a time transformation scheme.

3. Method of establishing a PWM-modulated output signal representation (OS) according to claim 1 or 2, whereby said time transformation scheme determines a serial stream of intersection estimates (SIR) and whereby said serial stream  
20 comprises frames of a predetermined number of PWM determining estimates.

4. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-3, whereby at least one of said predetermined number of PWM determining estimates is established on the basis of a corresponding  
25 first parallel intersection estimate being modified by a first time shift,

whereby at least one further of said predetermined number of PWM determining estimates is established on the basis of a further corresponding parallel intersection estimate being modified by a further time shift differing from said first time shift.

5. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-4, whereby said first time shift is obtained by adding  $\Delta T$  to said first parallel intersection estimate, said further time shift is obtained by subtracting  $\Delta T$  from said further parallel intersection estimate and where said  
5 established time shifted intersection estimates result in a first PWM output signal.

6. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-5, whereby a further PWM output signal is obtained by establishing a first differential time shift by subtracting  $\Delta T$  from said first parallel  
10 intersection estimate and establishing a further differential time shift by adding  $\Delta T$  to said further parallel intersection estimate and where said established time shifted intersection estimates result in a further PWM output signal.

7. Method of establishing a PWM-modulated output signal representation (OS)  
15 according to any of the claims 1-6, whereby said parallel reference signal representations (PRSR) comprise at least two geometrically linear functions and where said time transformation scheme is applied for subjecting intersection estimates obtained between said at least two geometrically linear functions and the input signal representation (IS) to at least two different time shifts, thereby  
20 transforming said intersection estimates into intersection estimates referring to the same time base.

8. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-7, whereby said parallel reference signal  
25 representations (PRSR) comprise two functions, preferably linear, and where said time transformation scheme is applied for subjecting intersection estimates obtained between said two functions and a differential input signal representation (IS) to four time shifts, at least two of said four shifts being mutually different, thereby transforming said intersection estimates into intersection estimates referring to the  
30 same time base.

9. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-8, whereby a three-level output signal is obtained by determining four intersections referring to different time bases and subsequently transforming these intersections into corresponding intersections referring to the same time base according to said time transformation scheme.

10. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-9, whereby a three-level output signal is obtained by determining two intersections between a parallel reference signal representation (PRSR) of a double-sided triangular reference signal and an input signal representation (ISR),

transforming said two determined intersections into four intersection representations by four time shifts.

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11. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-10, whereby said input signal representation comprises a single-ended input.

12. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-11, whereby said input signal representation comprises a differential input.

13. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-12, whereby said input signal (IS) is digitally represented.

14. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-13, whereby said stream of parallel reference signal representations (PRSR) is established as functions having desired properties with respect to the time axis, preferably symmetrically.

15. Method of establishing a PWM-modulated output signal representation (OS) according to any of the claims 1-14, whereby said stream of parallel reference signal representations (PRSR) is established on the basis of a model function (MF), which  
5 is represented in at least two different domains having mutually different time bases, one part of the model function (MF) being represented in a first domain and at least one further part being represented in a further domain.

16. Method of establishing a PWM-modulated output signal representation (OS)  
10 according to any of the claims 1-15, whereby said model function (MF) is a double-sided triangular periodic signal.